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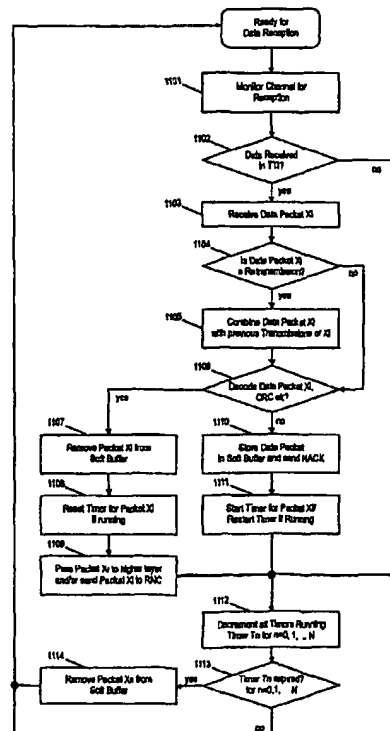
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[Continued on next page]

(54) Title: TIME MONITORING OF PACKET RETRANSMISSIONS DURING SOFT HANDOVER



(57) Abstract: The present invention relates to a method for scheduling data retransmissions, a method for use in a data retransmission scheme and a method for updating a soft buffer of a base station in a mobile communication system during a soft-handover. The present invention relates to a base station executing the controlling and updating method, a communication terminal for executing the scheduling method and to a mobile communication system comprising at least one the base station and communication terminal. To prevent erroneous combining of data packets in a packet retransmission scheme at the receiver, the present invention provides a method that may flush the soft buffer region associated to a received data packet upon its correct reception. Further, a method is provided that monitors the time elapsed since the last storing of a data packet in a buffer region of a base station to be able to trigger the flush of the buffer region upon expiry of a threshold time period.



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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/006559

| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>IPC 7 H04L1/18 H04Q7/38 H04L12/56   |  |  |
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| According to International Patent Classification (IPC) or to both national classification and IPC   |  |  |
| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br>IPC 7 H04L H04Q   |  |  |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched   |  |  |
| Electronic data base consulted during the international search (name of data base and, where practical, search terms used)<br>EPO-Internal  |  |  |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>   |  |  |
| Category *  | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.  |
| X   | WO 02/37872 A (MOTOROLA INC)<br>10 May 2002 (2002-05-10)<br>page 5, line 10 - line 12<br>page 6, line 21 - line 23<br>page 7, line 8 - line 11<br>page 7, line 15 - line 20<br>page 8, line 1 - line 15<br>page 9, line 8 - line 13<br>page 9, lines 19-21<br>page 10, line 16 - line 22 | 1-5,8,9,<br>15-20,26   |
| A   | US 2002/019965 A1 (GHIRNIKAR AVINASH ET AL) 14 February 2002 (2002-02-14)<br>paragraph [0009]<br>paragraph [0012]<br>paragraph [0021] - paragraph [0022]<br>paragraph [0026]<br>paragraph [0053]<br>paragraph [0061]   | 1-9,<br>15-20,26   |
| <input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.  |  |  |
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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/006559

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 8.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-9, 15-20, 26

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9,15-20,26

Restarting the monitoring timer on reception of a new data packet

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2. claims: 10-14,23-25

Configuration of the timer.

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3. claims: 27-38

Timer controlled retransmission of data packets in a communications terminal.

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4. claims: 21-22

Restarting the transmissions after the timer expires.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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| Patent document<br>cited in search report |    | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|----|---------------------|----------------------------|---------------------|
| WO 0237872                                | A  | 10-05-2002          | US 6678523 B1              | 13-01-2004          |
|   |    |                     | AU 1306802 A               | 15-05-2002          |
|   |    |                     | CN 1473410 A               | 04-02-2004          |
|   |    |                     | EP 1336269 A2              | 20-08-2003          |
|   |    |                     | JP 2004519122 T            | 24-06-2004          |
|   |    |                     | WO 0237872 A2              | 10-05-2002          |
| -----                                     |    |                     |                            |                     |
| US 2002019965                             | A1 | 14-02-2002          | NONE                       |                     |
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